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(54) Improvements in and relating to dispensers.

(57) A dispenser for dispensing toilet tissue or hand towels having an upright body (2) to hold a stack of individual tissues, the tissues being dispensed one at a time through a dispensing hole (10) in the base of the dispenser. At least two upstanding ribs (12) are provided on the bottom face of the dispenser, one on each side or one at the front and one at the back of the bottom face (6), the rib sloping down towards the dispensing hole (10). A stack of tissues rests on these ribs, allowing the bottom tissue to be pulled over the ribs (12) with less friction than if it were resting on a flat surface.

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IMPROVEMENTS IN AND RELATING TO DISPENSERS.

This invention relates to dispensers suitable for dispensing products such as toilet tissues or hand towels of paper or cellulose wadding and especially to dispensers of the type comprising an upright body to hold a stack of tissues (either 'C' or 'Z' folded), the tissues being dispensed one at a time through a dispensing hole in the base of the dispenser. Such a dispenser will hereinafter be referred to as "a dispenser of the type described".

When tissues are C folded they are stacked individually one on top of the other and each tissue is separated from the adjacent tissues. When the tissues are Z folded each tissue is attached to adjacent tissues by perforations and the long strip of perforated tissues is folded in zig-zag folds. During dispensing when one tissue is pulled down through the opening its movement is restricted by friction so that when the row of perforations reaches the dispenser outlet the dispensed tissue may be torn off from the remaining tissues. It is normally preferred, however, to interfold two zig-zag strips, the perforations of one strip being offset from the corresponding perforations of the other strip so that if the said one strip is pulled down until it reaches a row of perforations at the dispenser outlet ready for detachment, a half piece of the other strip is also pulled out from the dispenser and is thus available for the next user to grasp.

If the stack of tissues placed in a dispenser is too tissue too hard against the bottom plate surrounding the dispensing hole so that the tissue is difficult to dispense without tearing. Also it is difficult to dispense both C folded tissues which require a relatively large hole for ease of dispensing and Z folded or inter folded tissues which require a relatively small hole to provide sufficient resistance to dispensing so that the folded length of tissue does not just pull out in a "stream" from the dispensing hole without one tissue detaching from the adjacent tissue at a row of perforations.

Finally it is desirable to restrict the size of the dispensing hole to resist pilfering by insertion of a hand through the aperture or hole when a sizable length of tissue stack could be withdrawn.

It is the general object of the invention to produce a dispenser which can hold larger stacks of tissues as compared with that which has been possible hitherto, with a dispensing hole which is reasonably small.

A dispenser of the type described in accordance with the invention has on at least its bottom face on which a stack of tissues rests, at least two upstanding ribs, one on each side or one at the front and one at the back of the face, sloping down towards the dispensing hole. The stack of tissues rests on these ribs allowing the bottom tissue to be pulled over the ribs with less friction than if it were to be pulled over a flat surface on which the stack rests. of the dispensing hole there are preferably at least two ribs on each side of the hole to the rear of the hole and two or three ribs may also be provided at the front of the hole, the ribs extending from the rear and back faces respectively towards the dispensing aperture.

Preferably the dispenser is formed in two parts either the base or back part or the front part having an outwardly projecting wall adjacent the top designed for reception within the other part to limit the desired predetermined height of a tissue stack extending between the said wall and the bottom plate. This helps to prevent over filling of the dispenser.

The invention will now be further described by way of example with reference to the accompanying drawings in which:-

Figure 1 is a longitudinal section through the base or rear casing of one embodiment of a dispenser for dispensing toilet tissues, in accordance with the invention,

Figure 2 is a part plan view of the bottom part of Figure 1, namely the bottom face designed to hold a tissue stack,

Figure 3 is a section through the ribs shown in Figure 2,

Figure 4 is a side elevation of the outer casing of the dispenser,

Figure 5 is a section through the base or rear section of an alternative embodiment of dispenser for

Figure 6 is a plan view of the bottom portion of the section illustrated in Figure 5,

Figure 7 is a sketch front elevation corresponding to Figures 5 and 6 but showing a small stack of tissues in position, and

Figure 8 is a sketch corresponding to Figure 7 but showing the rear section in side elevation.

Referring to Figures 1 to 4 the dispenser comprises a base or rear part (see Figure 1) having an upright back face 2 and a forwardly projecting lower part generally shown at 4 on which a stack of tissues is intended to rest.

The forwardly projecting part 4 has an outer sloping face 6, sloping downwardly from the front face towards an aperture 10, the sloping face 6 being located between side walls 8. The aperture 10 is preferably of a sufficiently small size so as to prevent the average size adult hand from passing therethrough.

A triangular rib or web 12 extends from each side wall 8 sloping downwardly towards the sloping

bottom face 6 so that the outer side edges of a stack of tissues resting on the part 4 engages these ribs causing the stack to be slightly bound (see Figure 7) with the centre part of the stack in contact with the wall 6. This ensures that as a tissue from the stack is pulled down from the aperture 10 it can slide freely over the webs with much reduced friction and consequently with a much reduced risk of jamming or tearing as compared with an arrangement

Three small ribs 14 extend upwardly from each side of the floor 16 of the part 4 to the rear of the aperture 10. The inner edge portions of the bottom tissue in the stack rests on these ribs which raise the stack from the floor and also help to diminish friction during dispensing.

It has been found that the use of the ribs 12 and 14 enable both C and Z folded stacks of tissues to be dispensed with relative ease even when the tissues stack is significantly higher as compared with conventional dispensers.

The upper part of the back wall 2 of the base part is formed with an outwardly projecting wall 18 which is designed to fit over the top of a stack of tissues resting on the bottom part 4 of the dispenser. This acts to limit the height of the stack to that for which the dispenser has been designed and thus helps to prevent jamming.

Once a stack is in position between the parts 4 and 18 of the base section this is covered by the casing shown in Figure 4. In practice the bottom part of the casing may be hingedly connected to the part 4 of the rear sections so that it may be swung down when it is desired to refill the dispenser. After filling it is swung up over the base or rear section and secured thereto by a lock/catch or the like. The front of the casing is conveniently provided with a transparent section so that an observer can see when the dispenser needs to be refilled.

The alternative embodiment of dispenser illustrated towels. While the base section has substantially the same shape as that shown in Figures 1 to 4, it is wider and has a dispensing aperture 10' which is wider, so as to enable larger tissues suitable for hand towels to be dispensed. Also the arrangement of the part 4 of the dispenser is different.

Three symmetrically arranged triangular webs or ribs 20 extend down from the top of the front face 22 of the part 4 and to the sloping floor 6'. A triangular side rib 24 extends from each side wall 8' downwardly to the floor 16' and two shallow triangular ribs or webs 26 extend from the back wall 2' down to the floor 16'. If desired further ribs 28 can be provided on the back wall 2' above the ribs/webs 26.

A stack of tissues 30 (see sketches 7 and 8) when inserted into the dispenser rest on the ribs 20, 24 and 26 which hold the tissues stack from face engagement with the floor of the dispenser thus reducing friction and allowing C or Z folded tissues to be dispensed from a smaller dispensing hole than might otherwise be possible and/or enabling the stack of tissues which can be carried by the dispenser to be increased.

The dispenser aperture 10' is formed with well rounded corners to help to prevent tearing of the tissues as they are pulled out from the sides of the dispensing orifice. The front of the orifice is also curved to help dispensing. The portion 38 of the orifice extends downwardly from the plan of the sloping surface 6' to help

In use the base or rear section shown in Figures 5 and 6 is covered by an outer casing similar to that shown in Figure 4.

Claims

1. A dispenser for dispensing toilet tissue or hand towels of the type comprising an upright body to hold a stack of individual tissues, the tissues being enabled to be dispensed one at a time through a dispensing hole in the base of the dispenser, characterized in that at least the bottom face of the body on which a stack of tissues rests has at least two upstanding ribs, one on each side or one at the front and one at the back of the bottom face, the ribs sloping down towards the dispensing hole.

2. A dispenser as claimed in Claim 1 characterised in that at least two ribs are provided on each side of and to the rear of the hole and extend towards the dispensing hole.

3. A dispenser as claimed in either Claim 1 or Claim 2 characterised in that at least two ribs are provided in front of the hole and extend towards the dispensing hole.

4. A dispenser as claimed in any preceding Claim characterised in that at least one rib is provided on the rear wall of the dispenser.

5. A dispenser as claimed in any preceding Claim characterised in that the dispenser includes a front and a back part, one of the parts being provided with an outwardly projecting wall adjacent the top which is receivable within the other part to limit the height of a tissue stack extending between the wall and the bottom face of the dispenser.

Fig.1.

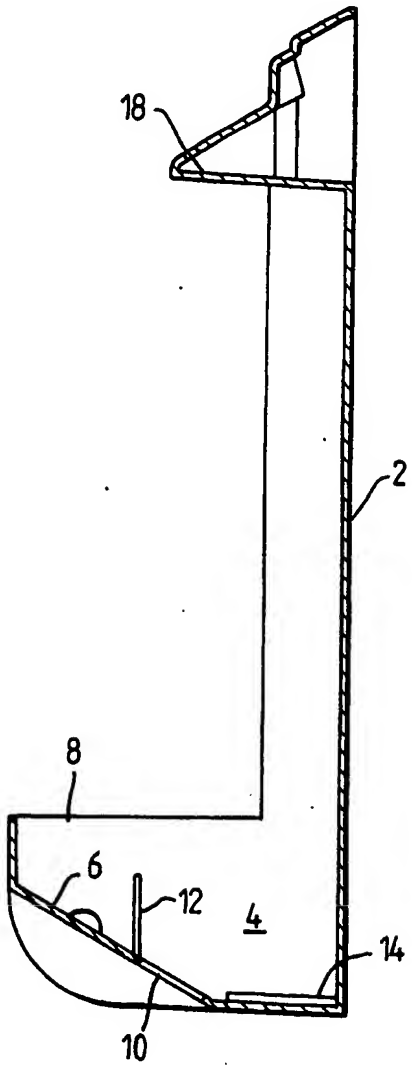


Fig.4.

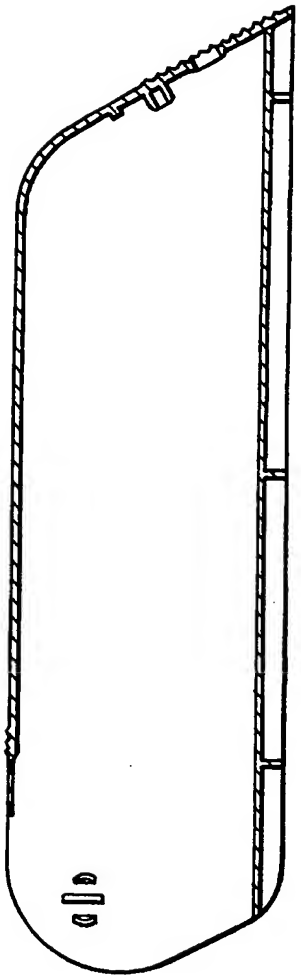


Fig.2.

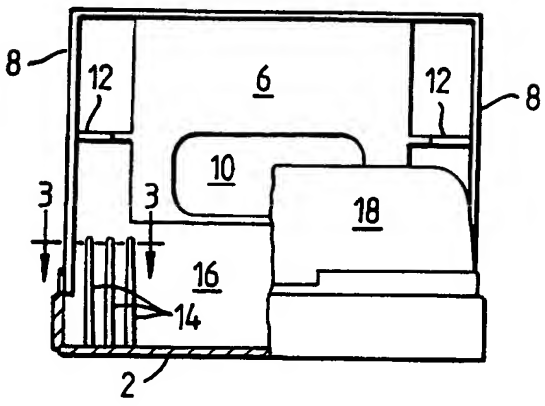


Fig.3.

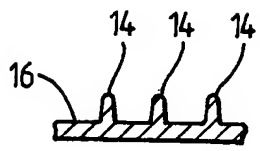


Fig.5.

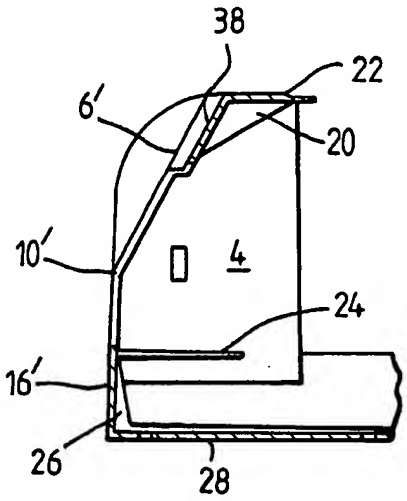


Fig.8.

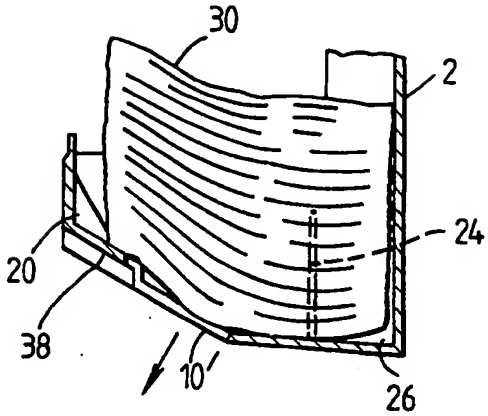


Fig.6.

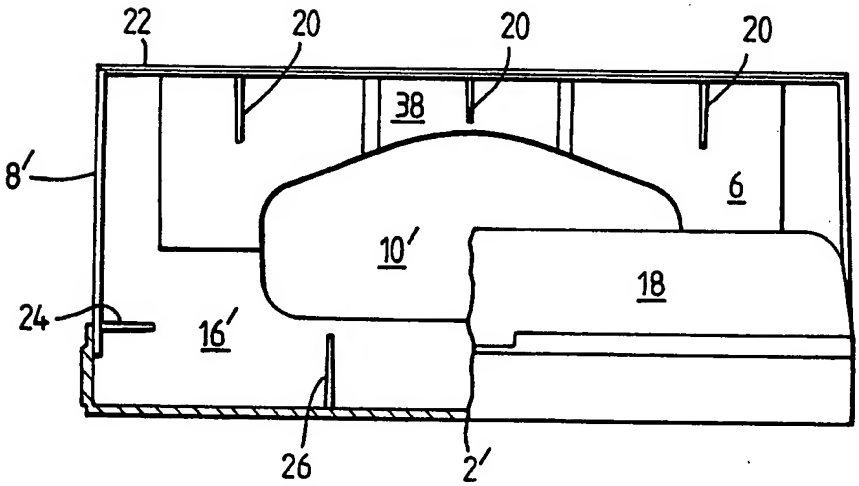
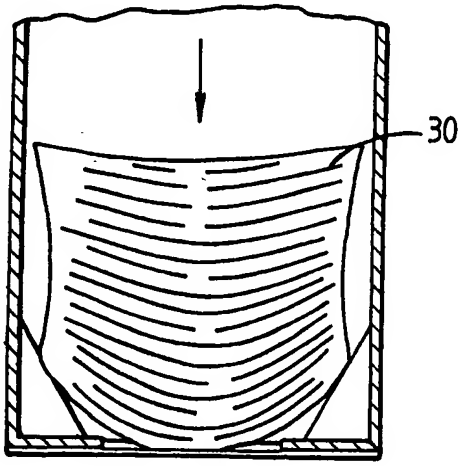


Fig.7.



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EUROPEAN SEARCH REPORT

Application Number

EP 89 31 2305

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	US-A-3 269 592 (SLYE, BLANCHARD & KRUEGER) * Column 2, lines 21-25,44-54; column 3, lines 10-16; figures 6-8 *	1-4	A 47 K 10/42
Y		5	
Y	US-A-2 195 727 (J.C. JENSEN) * Page 1, column 1, lines 41-47; figure 4 *	5	
A	US-A-4 678 099 (S. MATSUI) * Column 3, lines 66-68; column 4, lines 1-34; column 5, lines 3-45; figures 1-3,6-12 *	1-4	
A	US-A-4 166 551 (P. STIROS) * Column 8, lines 11-43; column 9, lines 36-51; figures 7,10 *	1-4	

TECHNICAL FIELDS SEARCHED (Int. Cl.5)

A 47 K

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	08-02-1990	KAPPOS A.

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